



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/778,010	02/11/2004	Kannan Srinivasan	33568/US/DJB	3326

32940 7590 03/10/2006

DORSEY & WHITNEY LLP  
555 CALIFORNIA STREET, SUITE 1000  
SUITE 1000  
SAN FRANCISCO, CA 94104

EXAMINER
----------

THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/778,010

Applicant(s)

SRINIVASAN ET AL.

Examiner

Ernest G. Therkorn

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 and 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1723

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherrington (U.S. Patent No. 5,066,784) in view of Barretto (U.S. Patent No. 5,532,279). At best, the claims differ from Sherrington (U.S. Patent No. 5,066,784) in reciting use of polymeric layering particles. Barretto (U.S. Patent No. 5,532,279) (column 4, lines 31-38) discloses that use of multiple layers of layering particles allows more control over the column capacity and improved column capacity. It would have been obvious to use polymeric layering particles in Sherrington (U.S. Patent No. 5,066,784) because Barretto (U.S. Patent No. 5,532,279) (column 4, lines 31-38) discloses that use of multiple layers of layering particles allows more control over the column capacity and improved column capacity.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherrington (U.S. Patent No. 5,066,784) in view of Barretto (U.S. Patent No. 5,532,279) as applied to claims 1-6 and 10 above, and further in view of Pohl (U.S. Patent No. 4,376,047). At best, the claim differs from Sherrington (U.S. Patent No. 5,066,784) in view of Barretto (U.S. Patent No. 5,532,279) in reciting binding by adsorption. Pohl (U.S. Patent No. 4,376,047) (column 1, lines 46-53) binding by adsorption allows for attachment as a monolayer. It would have been obvious to bind by adsorption in Sherrington (U.S. Patent No. 5,066,784) in view of Barretto (U.S. Patent No. 5,532,279)

Art Unit: 1723

because Pohl (U.S. Patent No. 4,376,047) (column 1, lines 46-53) binding by adsorption allows for attachment as a monolayer.

The remarks urge that column 2, lines 65-68 is the only place in Sherrington (U.S. Patent No. 5,066,784) that refers to a monolith. However, column 4, lines 63-65 of Sherrington (U.S. Patent No. 5,066,784) also discloses that the material is in monolithic form.

The remarks appear to urge that how to form a gel is not taught. However, column 3, lines 42-50 of Sherrington (U.S. Patent No. 5,066,784) discloses gel precursors are allowed to permeate the pores and reacted with the reactive groups of the pores.

The remarks urge that Sherrington (U.S. Patent No. 5,066,784)'s gel creates a backpressure. However, column 6, lines 25-32 of Sherrington (U.S. Patent No. 5,066,784) discloses the gel causes negligible pressure development.

The remarks urge that patentability based upon better pressure drops by using a monolith. However, there is no difference in pressure drops between Sherrington (U.S. Patent No. 5,066,784) and the claims based upon use of a monolith because Sherrington (U.S. Patent No. 5,066,784) discloses use of a monolith also. Unexpected results can not shown when there is no difference. It is well known in the art that monoliths have reduced pressure over the use of particles.

The remarks urge that there is no motivation to combine Sherrington (U.S. Patent No. 5,066,784) and Barretto (U.S. Patent No. 5,532,279). However, Barretto (U.S. Patent No. 5,532,279) (column 4, lines 31-38)'s discloses that use of multiple layers of

Art Unit: 1723

layering particles allows more control over the column capacity and improved column capacity. As such, motivation exists to use polymeric layering particles in Sherrington (U.S. Patent No. 5,066,784) because Barretto (U.S. Patent No. 5,532,279) (column 4, lines 31-38)'s discloses that use of multiple layers of layering particles allows more control over the column capacity and improved column capacity.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

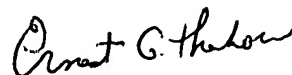
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 10/778,010

Page 5

Art Unit: 1723

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
March 8, 2006